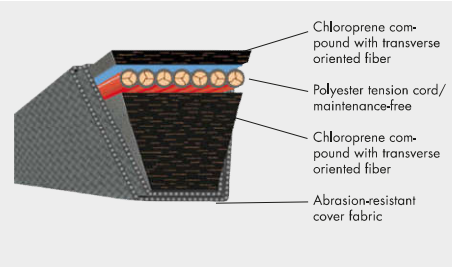
PRODUCT DESCRIPTION
optibelt RED POWER 3 HIGH PERFORMANCE WEDGE BELTS

Structure
optibelt RED POWER 3 wedge belts:



The tension cord consists of a special polyester cord. Due to the special processing of the tension cord the optibelt RED POWER 3 wedge belt is very low-stretch and maintenance-free, so that re-tensioning is not necessary.
The transverse fibre mixture on top of and under the tension cord guarantees a high dynamic load of the belt and ensures great flexibility. The cover fabric is highly flexible and abrasion-proof.

Properties
The optibelt RED POWER 3 is maintenance-free due to the high quality components and the special production method. The production processes are continuously monitored using state-of-the-art static and dynamic testing devices. The optibelt RED POWER 3 is suitable for the application in drives with idler pulleys due to its special construction.

The optibelt RED POWER 3 has the following properties:
- Maintenance-free
- Powerful
- Cost-effective
- S=C Plus usable in sets
- Environmentally friendly
- Electrically conductive according to ISO 1813
- Oil-resistant
- Heat-resistant
- Dust-protected as standard

On request with acceptance test certificate according to EN 1020 "3.1.B".

V-belt tensioning
For the initial installation of optibelt RED POWER 3 V-belts, the same methods are used as for standard Optibelt V-belts. The tension values are to be calculated on the same basis or to be taken from the table on page 146. Once correctly tensioned optibelt RED POWER 3 V-belts need no re-tensioning.

Application areas
optibelt RED POWER 3 wedge belts were especially developed for mechanical engineering. The application areas include compressors, pumps, presses, fans and other heavy duty drives.

Standardisation/Dimensions
optibelt RED POWER 3 wedge belts in the profiles SPZ, SPA, SPB, SPC, 3V/9N, 5V/15N and 8V/25N are standardised according to DIN 7753 Part 1, ISO 4184 and ARPM/MPTA.

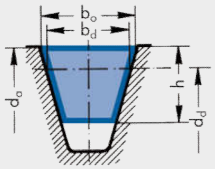


Table 1

Profile			SPZ	SPA	SPB	SPC
Belt top width	b_o	≈	9.7	12.7	16.3	22
Datum width	b_d	≈	8.5	11	14	19
Belt height	h	≈	8	10	13	18
Recommended minimum datum pulley diameter	$d_{d\,min}$		63	90	140	224
Weight per meter (kg/m)		≈	0.074	0.123	0.195	0.377
Flex rate (s^{-1})	$f_{B\,max}$	≈	100			
Belt speed (m/s)	v_{max}	≈	55*			

*v > 55 m/s. Please consult our Application Engineering Department.

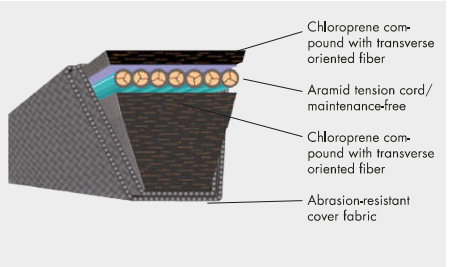
Table 2

Profile			3V/9N	5V/15N	8V/25N
Datum width	b_o	≈	9	15	25
Belt height	h	≈	8	13	23
Recommended minimum outside pulley diameter	$d_{a\,min}$		67	151	315
Weight per meter (kg/m)		≈	0.074	0.195	0.575
Flex rate (s^{-1})	$f_{B\,max}$	≈	100		
Belt speed (m/s)	v_{max}	≈	55*		

*v > 55 m/s. Please consult our Application Engineering Department.

PRODUCT DESCRIPTION
optibelt BLUE POWER HIGH PERFORMANCE WEDGE BELTS

Structure/Properties
optibelt BLUE POWER wedge belts:



The aramid tension cord has extremely low stretch compared to common materials such as polyester. The breaking strength is almost twice as high with the same cord diameter. Nevertheless, the fibre is extremely flexible.
The high quality specially prepared aramid tension cord is embedded in a rubber compound. It is supported by the top and bottom structures. These consist of a polychloroprene rubber compound with tranverse fibres.
The abrasion-proof cover fabric is coated with a special rubber compound and covers the whole belt. The V-belt is electrically conductive according to ISO 1813

Application areas
optibelt BLUE POWER belts are mainly used when
- highest power transmission levels are required
- there are limited design dimensions
- there is only little installation and tensioning space
- high temperature influences occur

This way, a much better performance is guaranteed e. g. with the same number of belts. Even the operation of once critical drives is now largely free of risk. Higher load limits are now safety zones. Thus optibelt BLUE POWER belts are mainly implemented in heavily loaded drives:
- in critical drives in mechanical engineering
- in special machines
- in agricultural machinery

Application
Attention: When retro-fitting existing drives please let Optibelt check the tension. As part of this description not all criteria can be dealt with. Please consult our Application Engineering Department.

Standardisation/Dimensions
optibelt BLUE POWER wedge belts in the profiles SPZ, SPA, SPB, SPC, 3V/9N, 5V/15N and 8V/25N are standardised according to DIN 7753 Part 1, ISO 4184 and ARPM/MPTA.

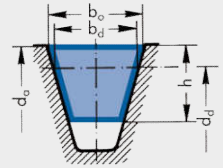


Table 3

Profile			SPB	SPC
Belt top width	b_o	≈	16.3	22
Datum width	b_d	≈	14	19
Belt height	h	≈	13	18
Distance	h_d	≈	3.5	4.8
Recommended minimum datum pulley diameter	$d_{d\,min}$		180	280
Weight per meter (kg/m)		≈	0.206	0.389
Flex rate (s^{-1})	$f_{B\,max}$	≈	100	
Belt speed (m/s)	v_{max}	≈	50*	

*v > 50 m/s. Please consult our Application Engineering Department.

Table 4

Profile			5V/15N	8V/25N
Datum width	b_o	≈	15	25
Belt height	h	≈	13	23
Recommended minimum outside pulley diameter	$d_{a\,min}$		191	315
Weight per meter (kg/m)		≈	0.204	0.603
Flex rate (s^{-1})	$f_{B\,max}$	≈	100	
Belt speed (m/s)	v_{max}	≈	50*	

*v > 50 m/s. Please consult our Application Engineering Department.

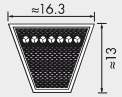
STANDARD RANGE

optibelt RED POWER 3 HIGH PERFORMANCE WEDGE BELTS

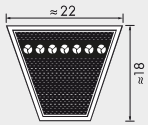
DIN 7753 PART 1 / ISO 4184

SPZ

SPA



SPB



SPC

Profile SPZ			Profile SPA				Profile SPB	Profile SPC
Datum length ISO [mm] L_d			Datum length ISO [mm] L_d				Datum length ISO [mm] L_d	Datum length ISO [mm] L_d
1202	1587	2137	1207	1700	2282	3082	1250	2000
1212	1600	2187	1232	1707	2300	3150	1320	2120
1237	1612	2240	1250	1732	2307	3182	1400	2240
1250	1637	2287	1257	1757	2332	3282	1500	2360
1262	1662	2360	1282	1782	2360	3350	1600	2500
1287	1687	2500	1307	1800	2382	3382	1700	2650
1312	1700	2650	1320	1807	2432	3550	1800	2800
1320	1737	2800	1332	1832	2482	3750	1900	3000
1337	1762	3000	1357	1857	2500	4000	2000	3150
1362	1787	3150	1382	1882	2532		2120	3350
1387	1800	3350	1400	1900	2582		2240	3550
1400	1837	3550	1407	1907	2607		2360	3750
1412	1862		1432	1932	2632		2500	4000
1437	1887		1457	1957	2650		2650	4250
1462	1900		1482	1982	2682		2800	4500
1487	1937		1500	2000	2732		3000	4750
1500	1987		1507	2032	2782		3150	5000
1512	2000		1532	2057	2800		3350	5300
1537	2037		1557	2082	2832		3550	5600
1562	2120		1582	2120	2847		3750	6000
			1600	2132	2882		4000	6300
			1607	2182	2932		4250	6700
			1632	2207	2982		4500	7100
			1657	2232	3000		4750	7500
			1682	2240	3032		5000	8000
							5300	8500
							5600	9000
							6000	9500
							6300	10000
							6700	
							7100	
							7500	
							8000	
Maximum production length: 4000 mm Non-standard length ranges on request Weight: ≈ 0.074 kg/m			Maximum production length: 4000 mm Non-standard length ranges on request Weight: ≈ 0.123 kg/m				Maximum production length: 12 500 mm Non-standard length ranges on request Weight: ≈ 0.195 kg/m	Maximum production length: 12 500 mm Non-standard length ranges on request Weight: ≈ 0.377 kg/m

Datum length L_d ≙ Pitch length L_w/L_p

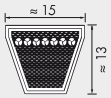
Lengths in **bold** type are in S=C Plus (SetConstant).

STANDARD RANGE

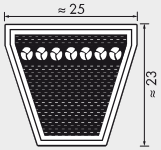
optibelt RED POWER 3 HIGH PERFORMANCE WEDGE BELTS

ARPM/MPTA

3V/9N



5V/15N



8V/25N

Profile 3V/9N		Profile 5V/15N		Profile 8V/25N	
Belt designation		Belt designation		Belt designation	
Profile, length code	Profile, outside length, L_a [mm]	Profile, length code	Profile, outside length, L_a [mm]	Profile, length code	Profile, outside length, L_a [mm]
3V 475	9N 1206	5V 530	15N 1346	8V 1000	25N 2540
3V 500	9N 1270	5V 560	15N 1422	8V 1120	25N 2845
3V 530	9N 1346	5V 600	15N 1524	8V 1180	25N 2997
3V 560	9N 1422	5V 630	15N 1600	8V 1250	25N 3175
3V 600	9N 1524	5V 670	15N 1702	8V 1320	25N 3353
3V 630	9N 1600	5V 710	15N 1803	8V 1400	25N 3556
3V 670	9N 1702	5V 750	15N 1905	8V 1500	25N 3810
3V 710	9N 1803	5V 800	15N 2032	8V 1600	25N 4064
3V 750	9N 1905	5V 850	15N 2159	8V 1700	25N 4318
3V 800	9N 2032	5V 900	15N 2286	8V 1800	25N 4572
3V 850	9N 2159	5V 950	15N 2413	8V 1900	25N 4826
3V 900	9N 2286	5V 1000	15N 2540	8V 2000	25N 5080
3V 950	9N 2413	5V 1060	15N 2692	8V 2120	25N 5385
3V 1000	9N 2540	5V 1120	15N 2845	8V 2240	25N 5690
3V 1060	9N 2692	5V 1180	15N 2997	8V 2360	25N 5994
3V 1120	9N 2845	5V 1250	15N 3175	8V 2500	25N 6350
3V 1180	9N 2997	5V 1320	15N 3353	8V 2650	25N 6731
3V 1250	9N 3175	5V 1400	15N 3556	8V 2800	25N 7112
3V 1320	9N 3353	5V 1500	15N 3810	8V 3000	25N 7620
3V 1400	9N 3556	5V 1600	15N 4064	8V 3150	25N 8001
		5V 1700	15N 4318	8V 3350	25N 8509
		5V 1800	15N 4572	8V 3550	25N 9017
		5V 1900	15N 4826	8V 3750	25N 9525
		5V 2000	15N 5080	8V 4000	25N 10160
		5V 2120	15N 5385	8V 4250	25N 10795
		5V 2240	15N 5690	8V 4500	25N 11430
		5V 2360	15N 5994	8V 4750	25N 12065
		5V 2500	15N 6350		
		5V 2650	15N 6731		
		5V 2800	15N 7112		
		5V 3000	15N 7620		
		5V 3150	15N 8001		
Maximum production length: 4000 mm L_a Non-standard length ranges on request Weight: ≈ 0.074 kg/m		Maximum production length: 12 500 mm L_a Non-standard length ranges on request Weight: ≈ 0.195 kg/m		Maximum production length: 12 500 mm L_a Non-standard length ranges on request Weight: ≈ 0.575 kg/m	

Lengths in **bold** type are in S=C Plus (SetConstant).